

## **REMARKS**

### **1. Summary of the Office Action**

In the Office Action mailed December 3, 2010, the Examiner: (i) objected to the specification because some paragraphs of the specification include reference to specific claim numbers; (ii) rejected claims 72 and 74 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,910,558 (Schoenherr); (iii) rejected claims 76-79 under 35 U.S.C. § 103(a) as being allegedly unpatentable over U.S. Patent No. 6,533,563 (Otaigbe) in view of U.S. Patent No. 5,171,489 (Hirao); (iv) rejected claims 72-75 under 35 U.S.C. § 103(a) as being allegedly unpatentable over Otaigbe in view of Hirao in view of EP Patent No. 1170318 (EP '318); (v) rejected claim 75 under 35 U.S.C. § 103(a) as being allegedly unpatentable over Schoenherr in view of Otaigbe; and (vi) rejected claims 73, 76, 77, and 79 under 35 U.S.C. § 103(a) as being allegedly unpatentable over Schoenherr in view of Hirao.

### **2. Status of the Claims**

Claims 72-79 are pending, of which claims 72 and 76 are independent and the remainder are dependent. Claims 38-71 and 80-94 are withdrawn.

Applicants have amended claims 72 and 76 to clarify the invention. No new matter has been added. Applicants expressly reserve the right to pursue in a continuation application, perhaps along with other subject matter, the subject matter of any of the claims as they were prior to the current amendments, since Applicants do not intend to give up coverage of that scope, and do not acquiesce in any assertion by the Examiner that is not expressly addressed by these remarks.

### **3. Response to Objection to the Specification**

As noted above, the Examiner objected to the specification. Applicants have amended the specification and respectfully submit that the objection to the specification is moot.

### **4. Response to Rejections under 35 U.S.C. §§ 102 and 103**

As noted above, the Examiner rejected independent claims 72 and 76. Applicants address the rejection of these independent claims in the following subsections.

**i. Claim 72**

The Examiner rejected claim 72 as being anticipated by Schoenherr and as being allegedly unpatentable over Otaigbe in view of Hirao in view of EP '318. Applicants have amended claim 72 to clarify that (i) the powder comprising essentially spherical particles of an aromatic polyether ketone plastic is for use in the production of three-dimensional structures or molded bodies by means of layered manufacturing methods and (ii) a medium grain size  $d_{50}$  of the spherical powder particles lies in a range from about 20 micrometers ( $\mu\text{m}$ ) to about 150  $\mu\text{m}$ . As will be discussed below, this use limitation is important to the invention, as the layered manufacturing process employing the inventive method is a very particular environment.

Applicants respectfully submit that amended claim 72 is neither anticipated by Schoenherr nor rendered obvious by Otaigbe in view of Hirao in view of EP '318. First, regarding the anticipation rejection, Schoenherr does not disclose the combination of elements recited by amended claim 72. In particular, Schoenherr does not disclose the claim feature of "wherein a medium grain size  $d_{50}$  of the spherical powder particles lies in a range from about 20 micrometers ( $\mu\text{m}$ ) to about 150  $\mu\text{m}$ ." This range of grain sizes is important for the suitability for the layered manufacturing method. However, Schoenherr does not disclose or suggest such a medium grain size of the spherical powder particles. In addition, Schoenherr does not disclose a method for producing a powder that is suitable for the use in the production of three-dimensional structures or molded bodies by means of a layered manufacturing method. In light of the above, Schoenherr fails to anticipate claim 72.

Second, regarding the obviousness rejection, amended claim 72 does not reasonably or logically follow from the combination of the cited references. In particular, the primary reference Otaigbe does not disclose or suggest the claim feature of "wherein a medium grain size  $d_{50}$  of the spherical powder particles lies in a range from about 20 micrometers ( $\mu\text{m}$ ) to about 150  $\mu\text{m}$ ." Further, Hirao and EP '318 fail to make up for the deficiency of Otaigbe.

In light of the above, "wherein a medium grain size  $d_{50}$  of the spherical powder particles lies in a range from about 20 micrometers ( $\mu\text{m}$ ) to about 150  $\mu\text{m}$ " does not reasonably or logically follow from the limited disclosure of the cited references. Since

the combination of the cited references would not reasonably or logically result in the invention of claim 72, Applicants submit that claim 72 is allowable.

Furthermore, Applicants submit that claims 73-75 are allowable as well for at least the reason that they depend from allowable claim 72.

**ii. Claim 76**

As noted above, the Examiner rejected claim 76 as (i) being allegedly unpatentable over Otaigbe in view of Hirao and (ii) as being allegedly unpatentable over Schoenherr in view of Hirao.

Applicants have amended claim 76 to clarify that (i) the powder comprising a first component in the form of essentially spherical powder particles and at least one of a stiffening fiber or a reinforcing fiber is for use in the production of three-dimensional structures or molded bodies by means of layered manufacturing methods and (ii) a medium length L50 of the fibers maximally corresponds to the value of the medium grain size d50 of the spherical powder particles.

Applicants respectfully submit that amended claim 76 is neither rendered obvious by Otaigbe in view of Hirao nor rendered obvious by Schoenherr in view of Hirao. In particular, Hirao describes the manufacturing of composite staple fibers. This implies the manufacturing of very long composite fibers with a very small fiber diameter. However, there is not the slightest hint to arrive at the combination of features of amended claim 76. The claim feature concerning medium length L50 of the fibers corresponding to the value of the medium grain size d50 is very advantageous for the layered manufacturing methods, wherein layers have to be evenly spread. Such a feature, however, is not disclosed or suggested by the cited references and is only disclosed by Applicants' specification.

In light of the above, claim 76 does not reasonably or logically follow from the limited disclosure of the cited references. Since the combination of the cited references would not reasonably or logically result in the invention of claim 76, Applicants submit that claim 76 is allowable.

Furthermore, Applicants submit that claims 77-79 are allowable as well for at least the reason that they depend from allowable claim 76.

**5. Conclusion**

For the foregoing reasons, Applicants submit that claims 72-79 are allowable. Therefore, Applicants request favorable reconsideration and allowance of the claims. Applicants do not acquiesce in any assertion by the Examiner that is not expressly addressed by these remarks. Should the Examiner wish to discuss this case with the undersigned, the Examiner is invited to call the undersigned at (312) 913-3350.

Respectfully submitted,

**McDONNELL BOEHNEN  
HULBERT & BERGHOFF LLP**

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By: /Scott M. Miller /  
Scott M. Miller  
Attorney for Applicants  
Reg. No. 62,967;

Michael H. Baniak  
Attorney for Applicants  
Reg. No. 30,608